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The on-screen version of the Collider-Accelerator Department Procedure is the Official Version.  
Hard copies of all signed, official, C-A Operating Procedures are kept on file in the C-A ESHQ Training Office, Bldg. 911A.*

## C-A OPERATIONS PROCEDURES MANUAL

### ATTACHMENT

#### 4.120.62.b Booster Gate Tests

C-A-OPM Procedures in which this Attachment is used.		
4.120.62		

#### Hand Processed Changes

<u>HPC No.</u>	<u>Date</u>	<u>Page Nos.</u>	<u>Initials</u>
_____	_____	_____	_____
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Approved: \_\_\_\_\_  
*Signature on File*  
Collider-Accelerator Department Chairman
\_\_\_\_\_  
Date

V. Castillo

## 4.120.62.b Booster Gate Tests

### PASS ANNUAL ACCEPTANCE TEST PROTOCOL

Division A Software Filename and Checksum: Title: \_\_\_\_\_ Checksum: \_\_\_\_\_

Division B Software Filename and Checksum: Title: \_\_\_\_\_ Checksum: \_\_\_\_\_

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#### Initial testing complete:

Test Team Leader's Name (Print): \_\_\_\_\_ Life Number: \_\_\_\_\_

Test Team Leader's Name (Sign): \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

#### Acceptance test procedure complete (following repairs and retesting if required):

Test Team Leader's Name (Print): \_\_\_\_\_ Life Number: \_\_\_\_\_

Test Team Leader's Name (Sign): \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

#### Test results reviewed by:

Safety Section Head's Name (Print): \_\_\_\_\_ Life Number: \_\_\_\_\_

Safety Section Head's Name (Sign): \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

#### Test results accepted by Radiation Safety Committee:

RSC Member's Name (Print): \_\_\_\_\_ Life Number: \_\_\_\_\_

RSC Member's Name (Sign): \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

**1.1 CONDUCT** Visual check on **BOOSTER** gates following Table-1, below

Gate	Micro Switch		Verify Elec Wiring OK	Verify Gate Box OK	Verify Open/Close Fctns OK	Verify all x's Corr.	Inspn OK Init.
	Verify Align OK	Verify Opern OK					
Man-Lock Inside (M-LI)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Man-Lock Outside (M-LO)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Booster Berm (BB)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Labyrinth A (Laby-A)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Labyrinth B (Laby-B)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Emergency (Emcy)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Plug Door (PD)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Plug Door Fence (PDF)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**Legend:** Tick = O.K. x = Problem N/A = Not Applicable

**Table 1: Summary of Physical Inspection of BOOSTER Gates**

☐ Check for acceptance of Visual check on BOOSTER gates

## 1.2 Test of Labyrinth A (Laby-A) gate

<input type="checkbox"/>	<b>VERIFY</b>	Hardware <input type="checkbox"/> , Electrical <input type="checkbox"/> at <b>Laby-A</b> gate is	<b>O.K.</b>
	<b>PLACE</b>	Booster in Restricted Access ( <b>RA</b> ) from <b>MCR</b> with <b>693</b> key and <b>P/B</b>	
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 <b>CA</b> relays: <b>CK2</b> <input type="checkbox"/> and <b>DK3</b> <input type="checkbox"/> are	<b>OFF</b>
	<b>PLACE</b>	AGS in <b>RA</b> from <b>MCR</b> with <b>693</b> key and <b>P/B</b>	
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 <b>CA</b> relay <b>CK1</b> is	<b>OFF</b>
<input type="checkbox"/>	<b>VERIFY</b>	Attempt to <b>open</b> Laby-A with <b>256</b> key is	<b>SUCCESSFUL</b>
	<b>CLOSE</b>	<b>Laby-A</b> gate	
	<b>PLACE</b>	Booster in Controlled Access ( <b>CA</b> ) from <b>MCR</b> with <b>693</b> key and <b>P/B</b>	
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 <b>CA</b> Relays: <b>CK2</b> <input type="checkbox"/> and <b>DK3</b> <input type="checkbox"/> are	<b>ON</b>
	<b>OPEN</b>	Gate Laby-A and hold open	
	<b>HOLD</b>	Crash glass microswitch ( <b>CGS</b> ), gate m-switch ( <b>GS</b> ) and Latch switch ( <b>LS</b> ) .	<b>CLOSED</b>
<input type="checkbox"/>	<b>VERIFY</b>	At enclosures 4524 (AGS side) and 4525 (Bstr side) Crash glass light ( <b>CGL</b> ) <input type="checkbox"/> , Gate light ( <b>GL</b> ) <input type="checkbox"/> and Latch light ( <b>LL</b> ) <input type="checkbox"/> are	<b>ON</b>
	<b>OPEN</b>	<b>CGS</b>	
<input type="checkbox"/>	<b>VERIFY</b>	<b>CGL</b> <input type="checkbox"/> , <b>GL</b> <input type="checkbox"/> and <b>LL</b> <input type="checkbox"/> are	<b>OFF</b>
	<b>SECURE</b>	<b>CGS</b>	
	<b>OPEN</b>	<b>GS</b>	
<input type="checkbox"/>	<b>VERIFY</b>	At encls 4524 and 4525 <b>CGL</b>	<b>ON</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encls 4524 and 4525 <b>GL</b> <input type="checkbox"/> and <b>LL</b> <input type="checkbox"/>	<b>OFF</b>
	<b>CLOSE</b>	<b>GS</b> and <b>hold closed</b>	
	<b>OPEN</b>	<b>LS</b>	
<input type="checkbox"/>	<b>VERIFY</b>	At encls 4524 and 4525 <b>CGL</b> <input type="checkbox"/> and <b>GL</b> <input type="checkbox"/>	<b>ON</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encls 4524 and 4525 <b>LL</b>	<b>OFF</b>
	<b>RELEASE</b>	<b>GS</b> and <b>LS</b>	
	<b>CLOSE</b>	Redundant gate microswitch ( <b>RGS</b> )	
<input type="checkbox"/>	<b>VERIFY</b>	At encls 4524 and 4525 Redundant gate light ( <b>RGL</b> ) is	<b>ON</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 relay <b>BK8</b> is	<b>ON</b>
	<b>OPEN</b>	<b>RGS</b>	
<input type="checkbox"/>	<b>VERIFY</b>	At encls 4524 and 4525 <b>RGL</b> is	<b>OFF</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 relay <b>BK8</b> is	<b>OFF</b>
	<b>CLOSE</b>	<b>Laby-A</b> gate	
<input type="checkbox"/>	<b>VERIFY</b>	At encls 4524, 4525 and 4527 (inside Laby-B) <b>Not Reset</b> light is	<b>ON</b>
	<b>RESET</b>	Laby-A at encl 4527 with <b>705</b> key and <b>P/B</b>	
	<b>RESET</b>	Laby-A at encl 4524 with <b>705</b> key	
<input type="checkbox"/>	<b>VERIFY</b>	At encls 4524, 4525 and 4527 <b>Reset</b> lights are	<b>ON</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 relays <b>BK3</b> <input type="checkbox"/> , <b>BK10</b> <input type="checkbox"/> and <b>BK12</b> <input type="checkbox"/> are	<b>ON</b>
	<b>OPEN</b>	Laby-A	
<input type="checkbox"/>	<b>VERIFY</b>	At encls 4524, 4525 and 4527 <b>Not Reset</b> lights are	<b>ON</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 relays <b>BK3</b> <input type="checkbox"/> , <b>BK10</b> <input type="checkbox"/> and <b>BK12</b> <input type="checkbox"/> are	<b>OFF</b>
	<b>RESET</b>	Laby-A at encl 4527 with <b>705</b> key and <b>P/B</b>	

- |                          |   |   |             |
|--------------------------|---|---|-------------|
|                          | <b>RESET</b>  | Laby-A at encl 4524 with <b>705 key</b>   |             |
| <input type="checkbox"/> | <b>VERIFY</b>   | At encls 4524, 4525 and 4527 <b>Reset</b> lights are  | <b>ON</b>   |
| <input type="checkbox"/> | <b>VERIFY</b>   | At encl 4521 <b>CK8</b> (all AGS gates reset) is  | <b>ON</b>   |
|                          | <b>OPEN</b>   | Laby-A at encl <b>4524</b> with <b>705 key</b> and <b>Sim. release</b> from <b>MCR</b> panel <b>W: AGS/Booster Labyrinth</b> button |             |
| <input type="checkbox"/> | <b>VERIFY</b>   | <b>Laby-A gate</b>  | <b>OPEN</b> |
|                          | <b>CLOSE</b>  | <b>Laby-A gate</b>  |             |
| <input type="checkbox"/> | <b>Check for acceptance of Test of Labyrinth A gate</b> |   |             |

### 1.3 Test of Labyrinth B (Laby-B) gate

- |                          |               |   |                   |
|--------------------------|---------------|---|-------------------|
| <input type="checkbox"/> | <b>VERIFY</b> | Hardware <input type="checkbox"/> , Electrical <input type="checkbox"/> at <b>Laby-B</b> gate is  | <b>O.K.</b>       |
|                          | <b>PLACE</b>  | Booster in Restricted Access ( <b>RA</b> ) from <b>MCR</b> with <b>693 key</b> and <b>P/B</b>   |                   |
| <input type="checkbox"/> | <b>VERIFY</b> | At encl 4521 <b>CA</b> relays: <b>CK2</b> <input type="checkbox"/> and <b>DK3</b> <input type="checkbox"/> are  | <b>OFF</b>        |
|                          | <b>PLACE</b>  | AGS in <b>RA</b> from <b>MCR</b> with <b>693 key</b> and <b>P/B</b>   |                   |
| <input type="checkbox"/> | <b>VERIFY</b> | At encl 4521 <b>CA</b> relay <b>CK1</b> is  | <b>OFF</b>        |
| <input type="checkbox"/> | <b>VERIFY</b> | Attempt to <b>open</b> Laby-B with <b>256 key</b> is  | <b>SUCCESSFUL</b> |
|                          | <b>CLOSE</b>  | <b>Laby-B gate</b>  |                   |
|                          | <b>PLACE</b>  | Booster in Controlled Access ( <b>CA</b> ) from <b>MCR</b> with <b>693 key</b> and <b>P/B</b>   |                   |
| <input type="checkbox"/> | <b>VERIFY</b> | At encl 4521 <b>CA</b> Relays: <b>CK2</b> <input type="checkbox"/> and <b>DK3</b> <input type="checkbox"/> are  | <b>ON</b>         |
|                          | <b>OPEN</b>   | Gate Laby-B and hold open   |                   |
|                          | <b>HOLD</b>   | Crash glass microswitch ( <b>CGS</b> ), gate m-switch ( <b>GS</b> ) and Latch switch ( <b>LS</b> )  | <b>CLOSED</b>     |
| <input type="checkbox"/> | <b>VERIFY</b> | At enclosures 4526 (Bstr side) and 4527 (AGS side) Crash glass light ( <b>CGL</b> ) <input type="checkbox"/> , Gate light ( <b>GL</b> ) <input type="checkbox"/> and Latch light ( <b>LL</b> ) <input type="checkbox"/> are | <b>ON</b>         |
|                          | <b>OPEN</b>   | <b>CGS</b>  |                   |
| <input type="checkbox"/> | <b>VERIFY</b> | <b>CGL</b> <input type="checkbox"/> , <b>GL</b> <input type="checkbox"/> and <b>LL</b> <input type="checkbox"/> are   | <b>OFF</b>        |
|                          | <b>SECURE</b> | <b>CGS</b>  |                   |
|                          | <b>OPEN</b>   | <b>GS</b>   |                   |
| <input type="checkbox"/> | <b>VERIFY</b> | At encls 4526 and 4527 <b>CGL</b>   | <b>ON</b>         |
| <input type="checkbox"/> | <b>VERIFY</b> | At encls 4526 and 4527 <b>GL</b> <input type="checkbox"/> and <b>LL</b> <input type="checkbox"/>  | <b>OFF</b>        |
|                          | <b>CLOSE</b>  | <b>GS</b>   |                   |
|                          | <b>OPEN</b>   | <b>LS</b>   |                   |
| <input type="checkbox"/> | <b>VERIFY</b> | At encls 4526 and 4527 <b>CGL</b> <input type="checkbox"/> and <b>GL</b> <input type="checkbox"/>   | <b>ON</b>         |
| <input type="checkbox"/> | <b>VERIFY</b> | At encls 4526 and 4527 <b>LL</b>  | <b>OFF</b>        |
|                          | <b>CLOSE</b>  | <b>LS</b>   |                   |
| <input type="checkbox"/> | <b>VERIFY</b> | At encls 4526 and 4527 Redundant gate light ( <b>RGL</b> ) is   | <b>ON</b>         |
|                          | <b>OPEN</b>   | <b>RGS</b>  |                   |
| <input type="checkbox"/> | <b>VERIFY</b> | At encl 4521 relay <b>BK9</b> is  | <b>OFF</b>        |
| <input type="checkbox"/> | <b>VERIFY</b> | At encls 4526 and 4527 <b>CGL</b> <input type="checkbox"/> , <b>GL</b> <input type="checkbox"/> and <b>LL</b> <input type="checkbox"/> are  | <b>ON</b>         |
| <input type="checkbox"/> | <b>VERIFY</b> | At encls 4526 and 4527 <b>RGL</b> is  | <b>OFF</b>        |
|                          | <b>CLOSE</b>  | <b>RGS</b>  |                   |
| <input type="checkbox"/> | <b>VERIFY</b> | At encls 4526, 4527 and 4525 (inside Laby-A) <b>Not Reset</b> light is  | <b>ON</b>         |
|                          | <b>RESET</b>  | Laby-B at encl 4525 with <b>715 key</b> and <b>P/B</b>  |                   |
|                          | <b>RESET</b>  | Laby-B at encl 4526 with <b>715 key</b>   |                   |
| <input type="checkbox"/> | <b>VERIFY</b> | At encls 4525, 4526 and 4527 <b>Reset</b> lights are  | <b>ON</b>         |

- |                          |   |  |             |
|--------------------------|---|--|-------------|
| <input type="checkbox"/> | <b>VERIFY</b>   | At encl 4521 relays <b>BK7</b> <input type="checkbox"/> and <b>BK11</b> <input type="checkbox"/> are                                   | <b>ON</b>   |
|                          | <b>OPEN</b>   | Laby-B   |             |
| <input type="checkbox"/> | <b>VERIFY</b>   | At encls 4525, 4526 and 4527 <b>Not Reset</b> lights are   | <b>ON</b>   |
| <input type="checkbox"/> | <b>VERIFY</b>   | At encl 4521 relays <b>BK7</b> <input type="checkbox"/> and <b>BK11</b> <input type="checkbox"/> are                                   | <b>OFF</b>  |
|                          | <b>RESET</b>  | Laby-B at encl 4525 with <b>715 key</b> and <b>P/B</b>   |             |
|                          | <b>RESET</b>  | Laby-B at encl 4526 with <b>715 key</b>  |             |
| <input type="checkbox"/> | <b>VERIFY</b>   | At encls 4525, 4526 and 4527 <b>Reset</b> lights are   | <b>ON</b>   |
| <input type="checkbox"/> | <b>VERIFY</b>   | At encl 4521 <b>CK8</b> (all AGS gates reset) is   | <b>ON</b>   |
|                          | <b>OPEN</b>   | Laby-B at encl <b>4526</b> with <b>715 key</b> and <b>Sim. release</b> from <b>MCR</b><br>panel <b>W: AGS/Booster Labyrinth</b> button |             |
| <input type="checkbox"/> | <b>VERIFY</b>   | <b>Laby-B</b> gate   | <b>OPEN</b> |
|                          | <b>CLOSE</b>  | <b>Laby-B</b> gate   |             |
| <br>                     |   |  |             |
| <input type="checkbox"/> | <b>Check for acceptance of Test of Labyrinth B gate</b> |  |             |

#### 1.4 Test of Emergency (Emcy) gate

- |                          |   |   |               |
|--------------------------|---|---|---------------|
| <input type="checkbox"/> | <b>VERIFY</b>   | Hardware <input type="checkbox"/> , Electrical <input type="checkbox"/> at <b>Emcy</b> gate is                                      | <b>O.K.</b>   |
| <input type="checkbox"/> | <b>VERIFY</b>   | At <b>MCR</b> Booster is in   | <b>CA</b>     |
| <input type="checkbox"/> | <b>VERIFY</b>   | At encl 4521 <b>CA</b> Relays: <b>CK2</b> <input type="checkbox"/> and <b>DK3</b> <input type="checkbox"/> are                      | <b>ON</b>     |
| <input type="checkbox"/> | <b>VERIFY</b>   | At <b>Emcy</b> gate <b>CA</b> light ( <b>CAL</b> ) is   | <b>ON</b>     |
|                          | <b>OPEN</b>   | <b>Emcy</b> gate and hold open  |               |
|                          | <b>HOLD</b>   | Gate m-switch ( <b>GS</b> ) and Redundant gate m-switch ( <b>RGS</b> ) .  | <b>CLOSED</b> |
| <input type="checkbox"/> | <b>VERIFY</b>   | At encl 4580 Gate light ( <b>GL</b> ) <input type="checkbox"/> and Redundant gate light ( <b>RGL</b> ) <input type="checkbox"/> are | <b>ON</b>     |
|                          | <b>OPEN</b>   | <b>GS</b>   |               |
| <input type="checkbox"/> | <b>VERIFY</b>   | <b>GL</b> is  | <b>OFF</b>    |
| <input type="checkbox"/> | <b>VERIFY</b>   | <b>RGL</b> <input type="checkbox"/> and <b>CAL</b> <input type="checkbox"/> are   | <b>ON</b>     |
|                          | <b>CLOSE</b>  | <b>GS</b>   |               |
|                          | <b>OPEN</b>   | <b>RGS</b>  |               |
| <input type="checkbox"/> | <b>VERIFY</b>   | <b>RGL</b> is   | <b>OFF</b>    |
| <input type="checkbox"/> | <b>VERIFY</b>   | <b>GL</b> <input type="checkbox"/> and <b>CAL</b> <input type="checkbox"/> are  | <b>ON</b>     |
|                          | <b>CLOSE</b>  | <b>RGS</b>  |               |
| <input type="checkbox"/> | <b>VERIFY</b>   | At encl 4580 <b>Not Reset</b> light is  | <b>ON</b>     |
| <input type="checkbox"/> | <b>VERIFY</b>   | At encl 4521 <b>DK1</b> <input type="checkbox"/> and <b>DK10</b> <input type="checkbox"/> are                                       | <b>OFF</b>    |
|                          | <b>RESET</b>  | <b>Emcy</b> gate with <b>705 key</b>  |               |
| <input type="checkbox"/> | <b>VERIFY</b>   | At encl 4580 <b>Reset</b> lights is   | <b>ON</b>     |
| <input type="checkbox"/> | <b>VERIFY</b>   | At encl 4521 <b>DK1</b> <input type="checkbox"/> and <b>DK10</b> <input type="checkbox"/> are                                       | <b>ON</b>     |
|                          | <b>OPEN</b>   | <b>Emcy</b> gate  |               |
| <input type="checkbox"/> | <b>VERIFY</b>   | At encl 4580 <b>Not Reset</b> light is  | <b>ON</b>     |
| <input type="checkbox"/> | <b>VERIFY</b>   | At encl 4521 <b>DK10</b> <input type="checkbox"/> and <b>DK10</b> <input type="checkbox"/> are                                      | <b>OFF</b>    |
| <br>                     |   |   |               |
| <input type="checkbox"/> | <b>Check for acceptance of Test of Emergency gate</b> |   |               |

## 1.5 Test of Berm gate

<input type="checkbox"/>	<b>VERIFY</b>	Hardware <input type="checkbox"/> , Electrical <input type="checkbox"/> at <b>Berm</b> gate is	<b>O.K.</b>
<input type="checkbox"/>	<b>VERIFY</b>	At <b>MCR</b> Booster is in	<b>CA</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 <b>CA</b> Relays: <b>CK2</b> <input type="checkbox"/> and <b>DK3</b> <input type="checkbox"/> are	<b>ON</b>
	<b>OPEN</b>	<b>Berm</b> gate and hold open	
	<b>HOLD</b>	Gate m-switch ( <b>GS</b> ) and Redundant gate m-switch ( <b>RGS</b> ) .	<b>CLOSED</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4979 Gate Reset light ( <b>GRL</b> ) <input type="checkbox"/> and Redun. Gate Reset light ( <b>RGRL</b> ) <input type="checkbox"/> are	<b>OFF</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 relays <b>FK1</b> <input type="checkbox"/> and <b>FK2</b> <input type="checkbox"/> are	<b>OFF</b>
	<b>RESET</b>	<b>Berm</b> gate with <b>705</b> key	
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4979 Gate Reset light ( <b>GRL</b> ) <input type="checkbox"/> and Redun. Gate Reset light ( <b>RGRL</b> ) <input type="checkbox"/> are	<b>ON</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 relays <b>FK1</b> <input type="checkbox"/> and <b>FK2</b> <input type="checkbox"/> are	<b>ON</b>
	<b>OPEN</b>	<b>GS</b>	
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4979 <b>GRL</b> is	<b>OFF</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 relay <b>FK1</b> is	<b>OFF</b>
	<b>CLOSE</b>	<b>GS</b>	
	<b>OPEN</b>	<b>RGS</b>	
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4979 <b>RGRL</b> is	<b>OFF</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 relay <b>FK2</b> is	<b>OFF</b>
	<b>CLOSE</b>	<b>RGS</b>	
	<b>CLOSE</b>	<b>Berm</b> gate	<b>OFF</b>
	<b>RESET</b>	<b>Berm</b> gate with <b>705</b> key	
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4979 Gate Reset light ( <b>GRL</b> ) <input type="checkbox"/> and Redun. Gate Reset light ( <b>RGRL</b> ) <input type="checkbox"/> are	<b>ON</b>
	<b>OPEN</b>	<b>Berm</b> gate	
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4979 Gate Reset light ( <b>GRL</b> ) <input type="checkbox"/> and Redun. Gate Reset light ( <b>RGRL</b> ) <input type="checkbox"/> are	<b>OFF</b>
	<b>CLOSE</b>	<b>Berm</b> gate	
<input type="checkbox"/>	Check for acceptance of Test of Berm gate		

## 1.6 Test of Man-Lock Outside (M-LO) gate

<input type="checkbox"/>	<b>VERIFY</b>	Hardware <input type="checkbox"/> , Electrical <input type="checkbox"/> at <b>M-LO</b> gate is	<b>O.K.</b>
	<b>PLACE</b>	Booster in Restricted Access ( <b>RA</b> ) from <b>MCR</b> with <b>693</b> key and <b>P/B</b>	
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 <b>CA</b> relays: <b>CK2</b> <input type="checkbox"/> and <b>DK3</b> <input type="checkbox"/> are	<b>OFF</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 <b>EK3</b> is	<b>ON</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 <b>CK10</b> (Bstr beam safely off) is	<b>ON</b>
<input type="checkbox"/>	<b>VERIFY</b>	Attempt to <b>open</b> M-LO with <b>256</b> key is	<b>SUCCESSFUL</b>
	<b>PLACE</b>	Booster in <b>CA</b> from <b>MCR</b> with <b>693</b> key and <b>P/B</b>	
<input type="checkbox"/>	<b>VERIFY</b>	At <b>MCR</b> Booster is in	<b>CA</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 <b>CA</b> Relays: <b>CK2</b> <input type="checkbox"/> and <b>DK3</b> <input type="checkbox"/> are	<b>ON</b>

	<b>OPEN</b>	Gate M-LO and hold open	
	<b>HOLD</b>	Crash glass microswitch ( <b>CGS</b> ), gate m-switch ( <b>GS</b> ) and Latch switch ( <b>LS</b> ) .	<b>CLOSED</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encls 4569 and 4568 Crash glass light ( <b>CGL</b> ) <input type="checkbox"/> , Gate light ( <b>GL</b> ) <input type="checkbox"/> and Latch light ( <b>LL</b> ) <input type="checkbox"/> are	<b>ON</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 relay <b>EK8</b> is	<b>ON</b>
	<b>OPEN</b>	<b>CGS</b>	
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 relay <b>EK8</b> is	<b>OFF</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encls 4569 and 4568 <b>CGL</b> is	<b>OFF</b>
	<b>CLOSE</b>	<b>CGS</b>	
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 relay <b>EK7</b> is	<b>ON</b>
	<b>OPEN</b>	<b>GS</b>	
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 relay <b>EK7</b> is	<b>OFF</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encls 4569 and 4568 <b>GL</b> is	<b>OFF</b>
	<b>CLOSE</b>	<b>GS</b>	
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 relay <b>EK13</b> is	<b>ON</b>
	<b>OPEN</b>	<b>LS</b>	
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 relay <b>EK13</b> is	<b>OFF</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encls 4569 and 4568 <b>LL</b> is	<b>OFF</b>
	<b>CLOSE</b>	<b>LS</b>	
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 relays <b>EK12</b> <input type="checkbox"/> and <b>EK16</b> <input type="checkbox"/> are	<b>ON</b>
	<b>OPEN</b>	<b>RGS</b>	
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 relays <b>EK12</b> <input type="checkbox"/> and <b>EK16</b> <input type="checkbox"/> are	<b>OFF</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encls 4569 and 4568 <b>RGL</b> is	<b>OFF</b>
	<b>CLOSE</b>	<b>RGS</b>	
<input type="checkbox"/>	<b>VERIFY</b>	At encls 4568 and 4569 <b>Not Reset</b> lights are	<b>ON</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 relays <b>EK14</b> <input type="checkbox"/> and <b>EK17</b> <input type="checkbox"/> are	<b>OFF</b>
	<b>RESET</b>	M-LO at encl 4569 with <b>705 key</b>	
<input type="checkbox"/>	<b>VERIFY</b>	At encls 4568 and 4569 <b>Reset</b> lights are	<b>ON</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encls 4568 and 4569 <b>Reset</b> lights are	<b>ON</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 relays <b>EK14</b> <input type="checkbox"/> and <b>EK17</b> <input type="checkbox"/> are	<b>ON</b>
	<b>OPEN</b>	M-LO	
<input type="checkbox"/>	<b>VERIFY</b>	At encls 4568 and 4569 <b>Not Reset</b> lights are	<b>ON</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 relays <b>EK14</b> <input type="checkbox"/> and <b>EK17</b> <input type="checkbox"/> are	<b>OFF</b>
	<b>CLOSE</b>	M-LO	
	<b>RESET</b>	M-LO at encl 4569 with <b>705 key</b>	
<input type="checkbox"/>	<b>VERIFY</b>	At encls 4568 and 4569 <b>Reset</b> lights are	<b>ON</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 relay <b>JK15</b> (Main magnet off) is	<b>ON</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 relay <b>EK1</b> (Bstr in <b>CA</b> ) is	<b>ON</b>
<input type="checkbox"/>	<b>VERIFY</b>	Attempt to <b>open</b> M-LO with <b>705 key</b> and <b>Sim release</b> is	<b>SUCCESSFUL</b>
	<b>CLOSE</b>	M-LO	
<input type="checkbox"/>	<b>VERIFY</b>	Attempt to <b>open</b> M-LO with <b>705 key</b> is	<b>SUCCESSFUL</b>
	<b>CLOSE</b>	M-LO	
<input type="checkbox"/>	<b>Check for acceptance of Test of Man-Lock Outside (M-LO) gate</b>		



## 1.7 Test of Man-Lock Inside (M-LI) gate

- |                          |               |  |             |
|--------------------------|---------------|--|-------------|
| <input type="checkbox"/> | <b>VERIFY</b> | Hardware <input type="checkbox"/> , Electrical <input type="checkbox"/> at <b>M-LI</b> gate is                 | <b>O.K.</b> |
| <input type="checkbox"/> | <b>VERIFY</b> | At <b>MCR</b> Booster is in  | <b>CA</b>   |
| <input type="checkbox"/> | <b>VERIFY</b> | At encl 4521 <b>CA</b> Relays: <b>CK2</b> <input type="checkbox"/> and <b>DK3</b> <input type="checkbox"/> are | <b>ON</b>   |
|                          | <b>OPEN</b>   | Gate M-LI and hold open  |             |
| <input type="checkbox"/> | <b>VERIFY</b> | At encl 4521 relay <b>EK4</b> is   | <b>ON</b>   |
|                          | <b>OPEN</b>   | <b>CGS</b>   |             |
| <input type="checkbox"/> | <b>VERIFY</b> | At encl 4521 relay <b>EK4</b> is   | <b>OFF</b>  |
| <input type="checkbox"/> | <b>VERIFY</b> | At encls 4581 and 4582 <b>CGL</b> is   | <b>OFF</b>  |
|                          | <b>CLOSE</b>  | <b>CGS</b>   |             |
| <input type="checkbox"/> | <b>VERIFY</b> | At encl 4521 relay <b>EK5</b> is   | <b>ON</b>   |
|                          | <b>OPEN</b>   | <b>GS</b>  |             |
| <input type="checkbox"/> | <b>VERIFY</b> | At encl 4521 relay <b>EK5</b> is   | <b>OFF</b>  |
| <input type="checkbox"/> | <b>VERIFY</b> | At encls 4581 and 4582 <b>GL</b> is  | <b>OFF</b>  |
|                          | <b>CLOSE</b>  | <b>GS</b>  |             |
| <input type="checkbox"/> | <b>VERIFY</b> | At encl 4521 relay <b>EK11</b> is  | <b>ON</b>   |
|                          | <b>OPEN</b>   | <b>LS</b>  |             |
| <input type="checkbox"/> | <b>VERIFY</b> | At encl 4521 relay <b>EK11</b> is  | <b>OFF</b>  |
| <input type="checkbox"/> | <b>VERIFY</b> | At encls 4581 and 4582 <b>LL</b> is  | <b>OFF</b>  |
|                          | <b>CLOSE</b>  | <b>LS</b>  |             |
|                          | <b>CLOSE</b>  | M-LI   |             |
- ☐ Check for acceptance of Test of Man-Lock Inside (M-LI) gate

## 1.8 Test of Plug Door (PD) gate

- |                          |               |   |               |
|--------------------------|---------------|---|---------------|
| <input type="checkbox"/> | <b>VERIFY</b> | Hardware <input type="checkbox"/> , Electrical <input type="checkbox"/> at <b>PD</b> gate is  | <b>O.K.</b>   |
|                          | <b>PLACE</b>  | Booster in Restricted Access ( <b>RA</b> ) from <b>MCR</b> with <b>693</b> key and <b>P/B</b>   |               |
| <input type="checkbox"/> | <b>VERIFY</b> | At encl 4521 <b>CA</b> Relays: <b>CK2</b> <input type="checkbox"/> and <b>DK3</b> <input type="checkbox"/> are  | <b>OFF</b>    |
|                          | <b>HAVE</b>   | <b>MCR</b> operator open <b>PD</b> gate to release gate micro-switches  |               |
|                          | <b>HOLD</b>   | Gate m-switch ( <b>GS</b> ) and Redundant gate switch ( <b>RGS</b> ) .  | <b>CLOSED</b> |
|                          | <b>PLACE</b>  | Booster in <b>CA</b>  |               |
| <input type="checkbox"/> | <b>VERIFY</b> | At encl 5005 Controlled Access light ( <b>CAL</b> ) <input type="checkbox"/> , Gate Light ( <b>GL</b> ) <input type="checkbox"/> and Redundant Gate light ( <b>RGL</b> ) <input type="checkbox"/> are | <b>ON</b>     |
|                          | <b>OPEN</b>   | <b>GS</b>   |               |
| <input type="checkbox"/> | <b>VERIFY</b> | At encl 5005 <b>CAL</b> <input type="checkbox"/> and <b>RGL</b> <input type="checkbox"/>  | <b>ON</b>     |

<input type="checkbox"/>	<b>VERIFY CLOSE</b>	At encl 5005 <b>GL</b> is <b>GS</b>	<b>OFF</b>
<input type="checkbox"/>	<b>VERIFY OPEN</b>	At encl 4521 Relay <b>DK5</b> is <b>RGS</b>	<b>ON</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 Relay <b>DK5</b> is	<b>OFF</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encl 5005 <b>CAL</b> <input type="checkbox"/> and <b>GL</b> <input type="checkbox"/>	<b>ON</b>
<input type="checkbox"/>	<b>VERIFY CLOSE</b>	At encl 5005 <b>RGL</b> <b>RGS</b>	<b>OFF</b>
	<b>HOLD</b>	<b>GS</b> and <b>RGS</b> .	<b>CLOSED</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encl 5005 <b>Not Reset</b> light is	<b>ON</b>
<input type="checkbox"/>	<b>VERIFY RESET</b>	At encl 4521 Relay <b>DK7</b> is PD at encl 5005 with <b>705 key</b>	<b>OFF</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encl 5005 <b>Reset</b> light is	<b>ON</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 relay <b>DK7</b> is	<b>ON</b>
	<b>OPEN</b>	<b>GS</b> and hold open	
<input type="checkbox"/>	<b>VERIFY</b>	At encl 5005 <b>Not Reset</b> light is	<b>ON</b>
	<b>CLOSE</b>	<b>GS</b>	
<input type="checkbox"/>	<b>VERIFY</b>	<b>Man-Lock Outside</b> gate is	<b>CLOSED</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 <b>GS</b> relay <b>EK7</b> is	<b>ON</b>
	<b>HAVE HAVE</b>	<b>MCR Operator Open PD</b> gate fully (if required) <b>MCR Operator Close PD</b> gate (if required)	
<input type="checkbox"/>	<b>VERIFY</b>	(If required closed) <b>PD</b> gate is	<b>CLOSED</b>
<input type="checkbox"/>	<b>Check for acceptance of Test of Plug Door (PD) gate</b>		

#### 1.9 Test of Plug Door Fence (PDF) gate

<input type="checkbox"/>	<b>VERIFY</b>	Hardware <input type="checkbox"/> , Electrical <input type="checkbox"/> at <b>PDF</b> gate is	<b>O.K.</b>
<input type="checkbox"/>	<b>VERIFY</b>	At <b>MCR</b> Booster is in	<b>RA</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 <b>RA</b> relay <b>EK3</b> is	<b>ON</b>
	<b>OPEN</b>	<b>PDF</b> gate and hold open	
	<b>HOLD</b>	Crash m-switch ( <b>CS</b> ) and gate m-switch ( <b>GS</b> ) .	<b>CLOSED</b>
<input type="checkbox"/>	<b>VERIFY OPEN</b>	At encl 4521 relay <b>DK8</b> is <b>GS</b>	<b>ON</b>
<input type="checkbox"/>	<b>VERIFY CLOSE</b>	At encl 4521 relay <b>DK8</b> is <b>GS</b>	<b>OFF</b>
<input type="checkbox"/>	<b>VERIFY OPEN</b>	At encl 4521 relay <b>DK8</b> is <b>CS</b>	<b>ON</b>
<input type="checkbox"/>	<b>VERIFY CLOSE</b>	At encl 4521 relay <b>DK8</b> is <b>CS</b>	<b>OFF</b>
<input type="checkbox"/>	<b>VERIFY</b>	At encl 4521 relay <b>DK8</b> is	<b>ON</b>
	<b>CLOSE</b>	<b>PDF</b> gate	
<input type="checkbox"/>	<b>Check for acceptance of Test of PDF gate</b>		

**END OF TEST PROCEDURE**

**TTL: Sign for completion of initial testing:** \_\_\_\_\_

**Date:** \_\_\_\_/\_\_\_\_/\_\_\_\_

**TTL: Sign for completion of final testing:** \_\_\_\_\_

**Date:** \_\_\_\_/\_\_\_\_/\_\_\_\_